

1642

120 0400

#3



OIPE

RAW SEQUENCE LISTING

PATENT APPLICATION: US/10/032,482

DATE: 01/17/2002

TIME: 17:45:07

Input Set : N:\Crf3\RULE60\10032482.raw

Output Set: N:\CRF3\01172002\J032482.raw

RECEIVED

FEB 21 2002

TECH CENTER 1600/2900

ENTERED

```

1 <110> APPLICANT: Cohen, Irun
2   ROTTER, Varda
3   Wolkowicz, Roland
4   RUIZ, Pedro
5   EREZ-ALON, Neta
6   HERKEL, Johannes
7 <120> TITLE OF INVENTION: IMMUNOGENIC COMPOSITIONS FOR INDUCTION OF ANTI-TUMOR
8   IMMUNITY
9 <130> FILE REFERENCE: COHEN42
10 <140> CURRENT APPLICATION NUMBER: 10/032,482
11 <141> CURRENT FILING DATE: 2002-01-02
13 <150> PRIOR APPLICATION NUMBER: US/09/445,602
14 <151> PRIOR FILING DATE: 2001-01-24
18 <150> PRIOR APPLICATION NUMBER: PCT/IL98/00266
19 <151> PRIOR FILING DATE: 1999-12-09
20 <150> PRIOR APPLICATION NUMBER: IL 121041
21 <151> PRIOR FILING DATE: 1997-06-09
22 <160> NUMBER OF SEQ ID NOS: 25
23 <170> SOFTWARE: PatentIn version 3.0
25 <210> SEQ ID NO: 1
26 <211> LENGTH: 104
27 <212> TYPE: PRT
28 <213> ORGANISM: Mus musculus
29 <400> SEQUENCE: 1
30   Ala Thr Gly Glu Ala Gly Ala Ser Val Lys Leu Ser Cys Lys Ala Ser
31       1             5             10             15
32   Gly Tyr Thr Phe Thr Ser Ser Trp Ile Asn Trp Val Lys Gln Arg Pro
33           20             25             30
34   Gly Gln Gly Leu Glu Trp Ile Gly Glu Ile Asp Pro Ser Asp Ser Tyr
35       35             40             45
36   Thr Asn Tyr Asn Gln Asn Phe Lys Asp Lys Ala Thr Leu Thr Val Asp
37       50             55             60
38   Lys Ser Ser Ser Thr Ala Tyr Met Gln Leu Ser Ser Leu Thr Ser Glu
39       65             70             75             80
40   Asp Ser Ala Val Tyr Tyr Cys Ala Arg Leu Leu Arg Tyr Phe Ala Met
41           85             90             95
42   Asp Tyr Trp Gly Gln Gly Thr Thr
43           100
45 <210> SEQ ID NO: 2
46 <211> LENGTH: 103
47 <212> TYPE: PRT
48 <213> ORGANISM: Mus musculus
49 <400> SEQUENCE: 2

```

RAW SEQUENCE LISTING

DATE: 01/17/2002

PATENT APPLICATION: US/10/032,482

TIME: 17:45:07

Input Set : N:\Crf3\RULE60\10032482.raw

Output Set: N:\CRF3\01172002\J032482.raw

```

50      Phe Leu Ser Cys Ile Ser Gly Ala Glu Gly His His Leu Ile Gln Gly
51      1              5              10              15
52      Gln Gln Lys Cys Gln Tyr Ile Trp Leu Tyr Tyr Met His Trp Asn Gln
53              20              25              30
54      Gln Lys Pro Gly Gln Pro Pro Arg Leu Leu Ile Tyr Leu Val Ser Asn
55              35              40              45
56      Leu Glu Ser Gly Val Pro Ala Arg Phe Ser Gly Ser Gly Ser Gly Thr
57              50              55              60
58      Asp Phe Thr Leu Asn Ile His Pro Val Glu Glu Glu Asp Ala Ala Thr
59      65              70              75              80
60      Tyr Tyr Cys Gln His Ile Arg Glu Leu Thr Arg Ser Glu Gly Gly Pro
61              85              90              95
62      Ser Trp Arg Ser Ile Arg Ile
63              100

```

65 <210> SEQ ID NO: 3

66 <211> LENGTH: 106

67 <212> TYPE: PRT

68 <213> ORGANISM: Mus musculus

69 <400> SEQUENCE: 3

```

70      Ser Trp Val Lys Pro Gly Ala Ser Val Lys Ile Pro Cys Lys Ala Ser
71      1              5              10              15
72      Gly Tyr Thr Phe Thr Asp Tyr Asn Met Asp Trp Val Lys Gln Ser His
73              20              25              30
74      Gly Lys Ser Leu Glu Trp Ile Gly Asp Ile Asn Pro Asn Asn Gly Tyr
75              35              40              45
76      Thr Ile Tyr Asn Gln Lys Val Lys Gly Lys Ala Thr Leu Thr Val Asp
77              50              55              60
78      Lys Ser Ser Asn Thr Ala Tyr Met Glu Leu Arg Ser Leu Thr Ser Glu
79      65              70              75              80
80      Asp Thr Ala Val Tyr Tyr Cys Val Arg Gly Gly Gly Leu Lys Gly Tyr
81              85              90              95
82      Pro Phe Val Tyr Trp Gly Gln Gly Thr Thr
83              100              105

```

85 <210> SEQ ID NO: 4

86 <211> LENGTH: 92

87 <212> TYPE: PRT

88 <213> ORGANISM: Mus musculus

89 <220> FEATURE:

90 <221> NAME/KEY: misc_feature

91 <222> LOCATION: (53)..(53)

92 <223> OTHER INFORMATION: Xaa is any amino acid.

93 <221> NAME/KEY: misc_feature

94 <222> LOCATION: (86)..(86)

95 <223> OTHER INFORMATION: Xaa is any amino acid

96 <221> NAME/KEY: misc_feature

97 <222> LOCATION: (90)..(90)

98 <223> OTHER INFORMATION: Xaa is any amino acid

99 <400> SEQUENCE: 4

```

100      Lys Val Thr Ile Thr Cys Ser Ala Ser Ser Ser Val Asn Phe Met His

```

RAW SEQUENCE LISTING

DATE: 01/17/2002

PATENT APPLICATION: US/10/032,482

TIME: 17:45:07

Input Set : N:\Crf3\RULE60\10032482.raw

Output Set: N:\CRF3\01172002\J032482.raw

```

101      1          5          10          15
102      Trp Phe Gln Gln Lys Pro Gly Thr Ser Pro Lys Leu Trp Ile Tyr Ser
103              20          25          30
104      Thr Ser Asn Leu Ala Ser Gly Val Pro Ala Arg Phe Ile Gly Ser Gly
105              35          40          45
W--> 106      Ser Gly Thr Ser Xaa Ser Leu Thr Ile Ser Arg Met Glu Ala Glu His
107              50          55          60
108      Ala Ala Thr Tyr Tyr Cys Gln Gln Arg Ser Ser Phe Pro Phe Thr Tyr
109      65              70          75          80
W--> 110      Gly Ser Gly Thr Lys Xaa Glu Ile Gln Xaa Asp Pro
111              85          90
113 <210> SEQ ID NO: 5
114 <211> LENGTH: 111
115 <212> TYPE: PRT
116 <213> ORGANISM: Mus musculus
117 <400> SEQUENCE: 5
118      Leu Gln Glu Ser Gly Pro Glu Leu Val Lys Pro Gly Ala Ser Val Lys
119      1          5          10          15
120      Ile Ser Cys Lys Ala Ser Gly Tyr Thr Phe Thr Asp Tyr Tyr Met Asn
121              20          25          30
122      Trp Val Lys Gln Ser His Gly Lys Ser Leu Glu Trp Ile Gly Asp Ile
123              35          40          45
124      Tyr Pro Asn Asn Gly Phe Thr Thr Tyr Asn Gln Lys Phe Lys Gly Lys
125              50          55          60
126      Ala Thr Leu Thr Val Asp Lys Ser Ser Ser Thr Ala Tyr Asn Glu Leu
127      65              70          75          80
128      Arg Asn Leu Thr Ser Glu Asp Ser Ala Val Tyr Tyr Cys Ala Arg Ser
129              85          90          95
130      Gly Ser Arg Phe Asp Tyr Trp Gly Gln Gly Thr Thr Val His Arg
131              100          105          110
133 <210> SEQ ID NO: 6
134 <211> LENGTH: 109
135 <212> TYPE: PRT
136 <213> ORGANISM: Mus musculus
137 <400> SEQUENCE: 6
138      Met Asp Ile Gln Leu Thr Gln Ser Pro Ala Thr Leu Ser Val Thr Pro
139      1          5          10          15
140      Gly Asp Ser Val Ser Leu Ser Cys Arg Ala Ser Gln Ser Ile Ser Asn
141              20          25          30
142      Asn Leu His Trp Tyr Gln Gln Lys Ser His Glu Ser Pro Arg Leu Leu
143              35          40          45
144      Ile Lys Phe Ala Ser Gln Ser Ile Ser Gly Ile Pro Ser Arg Phe Ser
145              50          55          60
146      Gly Ser Gly Ser Gly Thr Asp Phe Thr Leu Ser Ile Asn Ser Val Glu
147      65              70          75          80
148      Thr Glu Asp Phe Gly Val Tyr Phe Cys Gln Gln Ser Asn Ser Trp Pro
149              85          90          95
150      Val His Ala Arg Gly Gly Gly Thr Lys Leu Glu Asn Leu
151              100          105

```

RAW SEQUENCE LISTING

DATE: 01/17/2002

PATENT APPLICATION: US/10/032,482

TIME: 17:45:07

Input Set : N:\Crf3\RULE60\10032482.raw

Output Set: N:\CRF3\01172002\J032482.raw

```

153 <210> SEQ ID NO: 7
154 <211> LENGTH: 112
155 <212> TYPE: PRT
156 <213> ORGANISM: Mus musculus
157 <400> SEQUENCE: 7
158     Leu Gln Glu Ser Gly Ala Glu Leu Val Arg Ser Gly Ala Ser Val Lys
159         1             5             10             15
160     Leu Ser Cys Thr Ala Ser Gly Phe Asn Ile Lys Asp Tyr Tyr Met His
161         20             25             30
162     Trp Val Lys Gln Arg Pro Glu Gln Gly Leu Glu Trp Ile Gly Trp Ile
163         35             40             45
164     Asp Pro Glu Asn Gly Asp Thr Glu Tyr Ala Pro Lys Phe Gln Gly Lys
165         50             55             60
166     Ala Thr Met Thr Ala Asp Thr Ser Ser Asn Thr Ala Tyr Leu Gln Leu
167         65             70             75             80
168     Ser Ser Leu Ala Ser Glu Asp Thr Ala Val Tyr Tyr Cys Asn Phe Tyr
169         85             90             95
170     Gly Asp Ala Leu Asp Tyr Trp Gly Gln Gly Thr Thr Val Thr Val Ser
171         100             105             110
173 <210> SEQ ID NO: 8
174 <211> LENGTH: 112
175 <212> TYPE: PRT
176 <213> ORGANISM: Mus musculus
177 <400> SEQUENCE: 8
178     Pro Gln Asp Ile Gln Leu Thr Gln Ser Pro Leu Thr Leu Ser Val Thr
179         1             5             10             15
180     Ile Gly Gln Pro Ala Ser Ile Ser Cys Lys Ser Ser Gln Ser Leu Leu
181         20             25             30
182     Asp Ser Asp Gly Lys Thr Tyr Leu Asn Trp Leu Leu Gln Arg Pro Gly
183         35             40             45
184     Gln Ser Pro Lys Arg Leu Ile Tyr Leu Val Ser Lys Leu Asp Ser Gly
185         50             55             60
186     Val Pro Asp Arg Phe Thr Gly Ser Gly Ser Gly Thr Asp Phe Thr Leu
187         65             70             75             80
188     Lys Ile Asn Arg Val Glu Ala Glu Asp Leu Gly Val Tyr Tyr Cys Trp
189         85             90             95
190     Gln Gly Thr His Ser Pro Leu Thr Phe Gly Ala Gly Thr Lys Leu Lys
191         100             105             110
193 <210> SEQ ID NO: 9
194 <211> LENGTH: 17
195 <212> TYPE: PRT
196 <213> ORGANISM: Mus musculus
197 <400> SEQUENCE: 9
198     Glu Ile Asp Pro Ser Asp Ser Tyr Thr Asn Tyr Asn Gln Asn Phe Lys
199         1             5             10             15
200     Asp
202 <210> SEQ ID NO: 10
203 <211> LENGTH: 9
204 <212> TYPE: PRT

```

RAW SEQUENCE LISTING

DATE: 01/17/2002

PATENT APPLICATION: US/10/032,482

TIME: 17:45:07

Input Set : N:\Crf3\RULE60\10032482.raw

Output Set: N:\CRF3\01172002\J032482.raw

```

205 <213> ORGANISM: Mus musculus
206 <400> SEQUENCE: 10
207     Leu Leu Arg Tyr Phe Ala Met Asp Tyr
208     1                               5
210 <210> SEQ ID NO: 11
211 <211> LENGTH: 8
212 <212> TYPE: PRT
213 <213> ORGANISM: Mus musculus
214 <400> SEQUENCE: 11
215     Gln His Ile Arg Glu Leu Thr Arg
216     1                               5
218 <210> SEQ ID NO: 12
219 <211> LENGTH: 17
220 <212> TYPE: PRT
221 <213> ORGANISM: Mus musculus
222 <400> SEQUENCE: 12
223     Asp Ile Asn Pro Asn Asn Gly Tyr Thr Ile Tyr Asn Gln Lys Val Lys
224     1                               5                10                15
225     Gly
227 <210> SEQ ID NO: 13
228 <211> LENGTH: 11
229 <212> TYPE: PRT
230 <213> ORGANISM: Mus musculus
231 <400> SEQUENCE: 13
232     Gly Gly Gly Leu Lys Gly Tyr Pro Phe Val Tyr
233     1                               5                10
235 <210> SEQ ID NO: 14
236 <211> LENGTH: 9
237 <212> TYPE: PRT
238 <213> ORGANISM: Mus musculus
239 <400> SEQUENCE: 14
240     Gln Gln Arg Ser Ser Phe Pro Phe Thr
241     1                               5
243 <210> SEQ ID NO: 15
244 <211> LENGTH: 17
245 <212> TYPE: PRT
246 <213> ORGANISM: Mus musculus
247 <400> SEQUENCE: 15
248     Asp Ile Tyr Pro Asn Asn Gly Phe Thr Thr Tyr Asn Gln Lys Phe Lys
249     1                               5                10                15
250     Gly
252 <210> SEQ ID NO: 16
253 <211> LENGTH: 7
254 <212> TYPE: PRT
255 <213> ORGANISM: Mus musculus
256 <400> SEQUENCE: 16
257     Ser Gly Ser Arg Phe Asp Tyr
258     1                               5
260 <210> SEQ ID NO: 17

```

VERIFICATION SUMMARY

PATENT APPLICATION: US/10/032,482

DATE: 01/17/2002

TIME: 17:45:08

Input Set : N:\Crf3\RULE60\10032482.raw

Output Set: N:\CRF3\01172002\J032482.raw

L:106 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:4

L:110 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:4